

SECRET

Number 2

W2
A2
F555s
S W P A
MALARIA ?
503

UNCLASSIFIED

15 January, 1944

Reports received to date indicate that members of Malaria Control are interested in this form of monthly news bulletin, however, to date very few suggestions for a name of this newsletter have been received. Members are also reminded to supply bits of information suitable for publication.

* * * * *

The Army Medical School has requested samples of Anopheles mosquitoes for teaching purposes. Accordingly it is requested that all survey units (and control units unassociated with survey units) submit to this office as many anopheline adults and larvae as possible.

Novocaine carpules, which can be obtained from any dental clinic, are suitable for mailing larvae, adults can be packed in metal ointment boxes with compressed cotton, or lens paper. Specimens should be sent to this office.

THANKS.

* * * * *

The 17th MSU at Base A has been having considerable success in finding natural roosting places for adult A. punctulatus punctulatus. These places are characterized as vertical clay banks on the outside curves of streams. The stream banks have been observed to be about six feet high, topped by overhanging grass or roots, with a moist soil, and not in dense shade.

* * * * *

In the event consultation with Lt. Col. W. V. King, Sn. C. on any entomological problems is required, he can be reached at his new address of 3rd Medical Laboratory, APO 503.

* * * * *

An almost classic remark on mosquito surveying can be credited to Dr. M. A. Barber, which is quoted in the new book Anopheles gambiae in Brazil, 1930 - 1940 by F. L. Soper, and D. B. Wilson (Rockefeller Foundation, NYC, 1943).

Dr. Barber stated that in its early months "the Malaria Service of the Northeast (Brazil) was not getting the desired results because, as a 'shade-loving Service,' it failed to contact the 'sun-loving larvae' of gambiae." In other words get out in the field.

* * * * *

A new WD Training Circular (No. 108, 21 September, 1943) has been published. This covers instructions on the training of all personnel in the USA in anti-malaria measures. Malariologists are advised to check at their local AG offices for copies of this training circular.

* * * * *

The following is a set of questions prepared and asked of officers and enlisted men of the First Air Task Force by Captain Honess of the 4th MSU.

Questions asked of the Officers with Answers Given:

Number interviewed --17

1. Q. How long have you been in New Guinea?
A. 1 to 15 months. Average--7.1 months.
2. Q. Have you had malaria?
A. Yes 1, or 6.2%. No, 16.
3. Q. Have you seen a motion picture on malaria and its control?
A. Yes 10, or 58.8%. No, 7

CLASSIFICATION CANCELLED
by authority of
THE SURGEON GENERAL

87C Date 9 Sep 52
Chief Capt. HSC
Security Officer

UNCLASSIFIED

UNCLASSIFIED

- 4a. Q. What is the Freon-Aerosol Bomb used for?
A. Insecticide, 14, or 32.3%. Did not know, 3.
- 4b. Q. Do you have one in your possession?
A. Yes, 11, or 64.7%. No, 6.
- 4c. Q. Are your quarters sprayed twice daily?
A. Yes, 6, or 35.3%. Once daily, 3, or 18%. No, or did not answer, 8.
- 5a. Q. Do you spray under your bed net?
A. Yes, 9, or 52.9%. No, 8.
- 5b. Q. How often?
A. Twice daily, 2. Once daily, 5. Occasionally, 1.
- 6a. Q. Do you have a bottle of mosquito repellent?
A. Yes, 15, or 88.2%. No, 2.
- 6b. Q. How often do you use it?
A. Twice daily, 1. Every evening, 2. Show nights, 1. Occasionally, 7. Do not use, 4.
7. Q. Have you given men of your command instructions on individual protective measures to be taken against malaria?
A. Yes, 9, or 53%. No, 3, or 17.6%. Five did not command.
- 8a. Q. Have inspections been made at night to determine if bed nets are properly used?
A. Yes, 3, or 17.6%. No, 5, or 30%. Did not know, 1. Did not think so, 1. Did not command, 2. Did not answer, 5.
9. Q. Of these two groups of mosquitoes, which are carriers of malaria?
(a) Anophelines
(b) Culicines
A. (a), 9. (b), none.
10. Q. In your estimation, what is the state of malaria discipline in your command?
(a) Very satisfactory
(b) Satisfactory
(c) Unsatisfactory
A. (a), 8. (b) 3. (c), none.

QUESTIONS ASKED OF ENLISTED MEN AND ANSWERS GIVEN

Number interviewed: 128

1. Q. How long have you been in New Guinea?
A. 1-15 months. Average-6.7 months.
2. Q. Have you had malaria?
A. Yes, 25, or 19.5%. These 25 men had a total of 57 hospitalizations, or an average of 2.2 hospitalizations per man. No, 102. Did not know, 1.
3. Q. Have you received instruction through your organization on individual protective measures to be taken against malaria?
A. Yes, 128 or 100%.

4. Q. Have you seen a motion picture on malaria and its control?
A. Yes, 50, or 39%. No, 77. Doubtful, 1.
5. Q. Do you know how malaria is spread among troops?
A. Yes, 127, or 99.2%. No, 1%.
- 6a. Q. Do you know what the Freon-Aerosol Bomb is used for?
A. Yes, 80, or 62.5%. No, 48.
- 6b. Q. Is there one in your possession, or at your tent?
A. Yes, 80, or 62.5%. No, 47. Don't know, 1.
- *7a. Q. Do you spray your tent?
A. Yes, 106, or 82.8%. No, 22.
- 7b. Q. How often?
A. Twice daily, 6, or 4.6%. Once daily, 66, or 51.5%. Occasionally, 16. Seldom, 6.
- 8a. Q. Do you spray under your bednet?
A. Yes, 92, or 71.8%. No, 36, or 28.2%.
- 8b. Q. How often?
A. Twice daily, 6, or 4.6%. Once daily, 66, or 51.5%. Occasionally, 16. Seldom, 6.
- 9a. Q. Do you have a bottle of #612 mosquito repellent?
A. Yes, 117, or 91.4%. No, 11, or 8.6%.
- 9b. Q. Do you use it?
A. Every night, 57, or 44.5%. Some nights, 27. Occasionally, 12. Seldom 18. Never 4.
10. Q. Do you take atabrine regularly?
A. Yes, 128, or 100%.
11. Q. Of these things, which do you believe to be true?
(A) Atabrine keeps you from getting malaria.
(B) Kills the mosquito when it bites.
(C) Suppresses malaria.
A. (A) 22, or 17.1%. (C) 105, or 82%. One did not answer.
12. Q. Which of these two groups of mosquitoes make a singing noise while in flight?
(A) Anopheline, or malaria carrying mosquitoes.
(B) Pest mosquitoes.
A. (B) 119, or 92.9%. (A) 4. (AB) 1. ?3. No answer, 1.
13. Q. Do you think you would know if you were being bitten by an anopheline mosquito unless you actually saw the mosquito biting?
A. No, 86, or 67.1%. Yes, 16. Doubtful, 26.
14. (Was there a violation of regulations at the time of interview?)
Yes, 28, or 21%. No, 100, or 79%.

* 1 Men of one unit had the hand-sprayer for spraying their tents, which accounts for the discrepancy between 6b and 7a.

Be sure to look at p. 19 of the 31 December, 1943 issue of "Yank Down Under". This contains a nice one page spread of the artistry of Pvt. Cyril F. Jones, recently transferred to the 4th MCU.

* ——— * ——— * ——— * ——— *

It is requested that all survey or control units, who have been in occupancy of an area for a period of three months or more furnish this office with two (2) sketch maps of the entire area (8" x 10 $\frac{1}{2}$ "). By means of symbols survey units should show areas already surveyed, and areas yet to be covered. Control units should designate areas being oiled, areas of ditching, ditching, stream-training, etc.

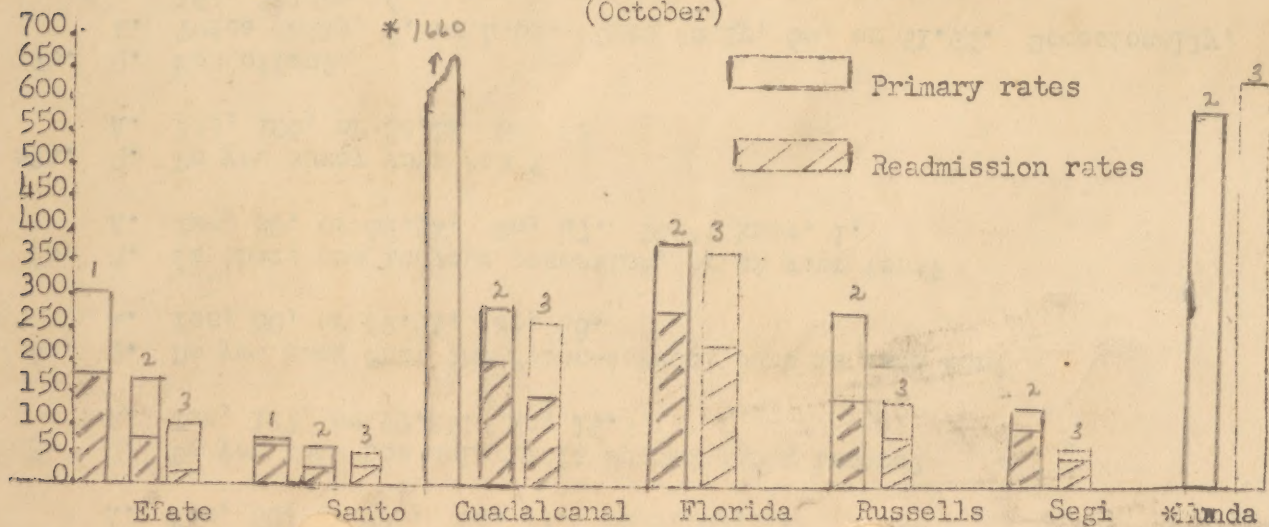
* ——— * ——— * ——— * ——— *

Malaria Rates in South Pacific (quoted from Malaria News Ltr #5, November, 1943).

In Table I, below, the monthly malaria rates for the various bases are presented so as to show progress by a comparison of rates of one year ago and one month ago, with those of the current month. In every instance, except at Munda, rates have declined. Conditions at Efate and Santo are particularly satisfactory in view of the fact that these bases are not on atabrine suppression. Efate rates, following a definite September rise due to cessation of suppressive therapy, have again dropped, and a record low for primary rates on this base (22/1000/annum) is recorded for October. A decline in malaria is also noted in Russell and Segi reflecting good control conditions and a minimum of transmission. Only the rates at Munda remain relatively high. The reason for this, at this base, is largely due to clinical break-throughs, under conditions of combat, in troops heavily seeded with malaria elsewhere. Actually, the amount of malaria being contracted at Munda is remarkable low. For example, one unseeded group of 782 men, at Munda for two and one-half months, has had a rate of only 30/1000/annum. This rate has followed a vigorous mosquito control program which has made it difficult, in the period prior to the month of October, to find either adult or larval anophelines.

COMPARISON OF MONTHLY BASE MALARIA RATES/1000/ANNUM

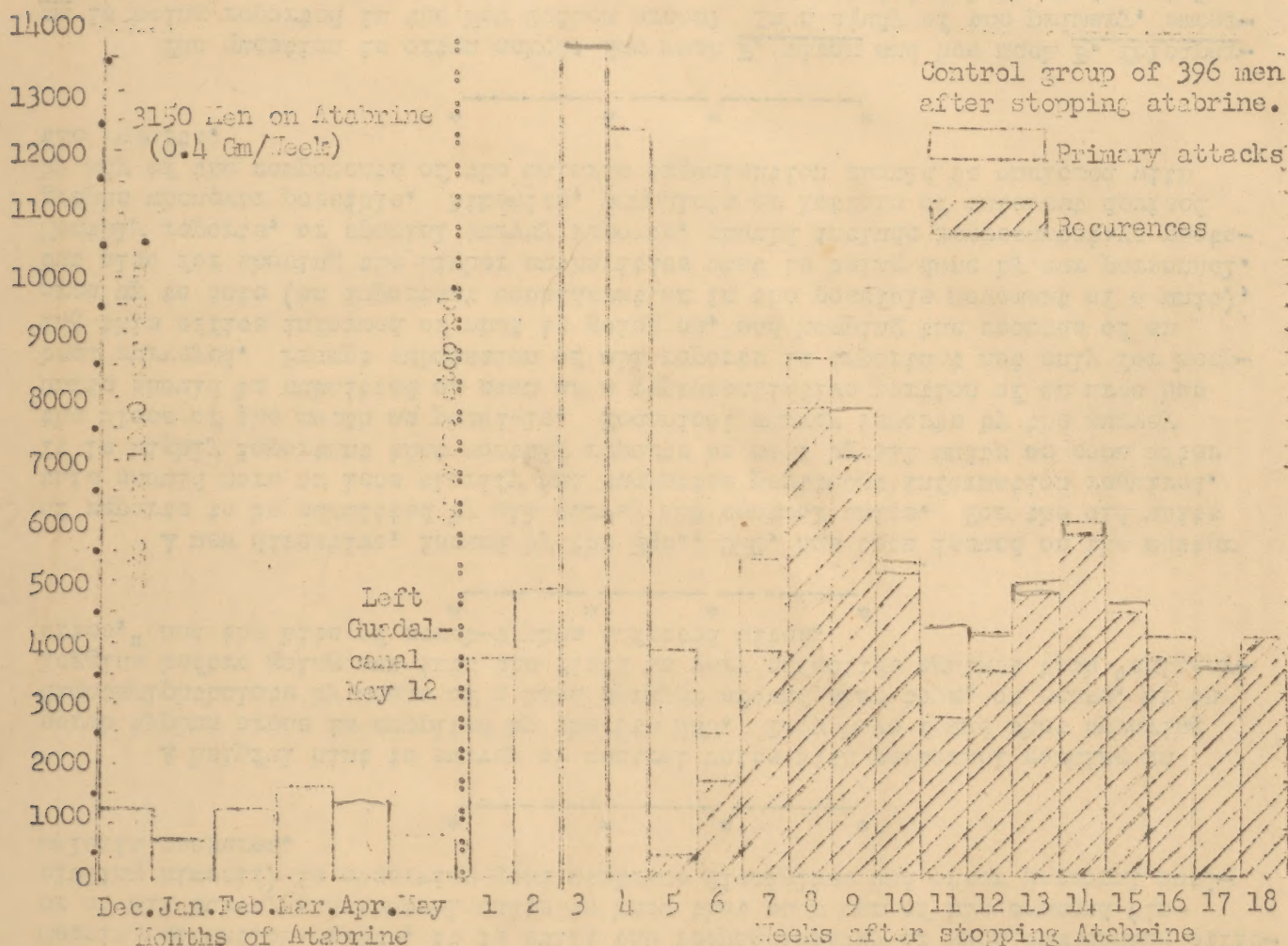
(October)



* Primary and readmission rates not differentiated

The South Pacific in their Malaria News Letter #4, October, 1943, cited their experience of demalarialization of U. S. Army troops returning from Guadalcanal. It is to be noted that suppressive treatment was discontinued immediately after leaving the malarious area. In conclusion they state: "It is, however, becoming increasingly clear that where demalarialization of a heavily-seeded unit is carried out the quickest way to get the unit back to an effective duty status is to slip all anti-malarious drugs immediately on arrival at a non-malarious base and to treat individual cases as they occur, provided that adequate hospital facilities are available."

MALARIA IN INFANTRY REGIMENT - RATE/1000/ANNUUM



The Seventh Fleet, SWPA, has a very able Malaria Organization under the direction of Lt. Comdr. J. N. DeLamater, MC, USN. In many places units of the Org. for Malaria Control are working in areas in proximity with Navy malaria teams. Contact should be established with these Navy malaria teams and a system of close cooperation evolved.

New Arrivals ----

26th MSU -- Captain P. J. Darlington, Jr., Sn C (entomologist) and 1st Lt W. J. LaCasse, Sn C (parasitologist). New Malarialogists include: Major MacBroom Benjamin, MC, Captain V. H. Handy, MC, Captain V. C. McElahan, MC, and 1st Lt. F. M. Davenport, MC, 1st Lt. W. E. Hatcher, C E, has been appointed

C.O. of the 4th MCU, vice Capt. D. B. Lee, Sn.C., and Capt. P. C. Young, C.E.
as C.O. of the 11th MCU, vice Capt. Alfred Stein, Sn.C.

* * * *

It is becoming increasingly important that all members of the malaria organization observe to the fullest extent the principles of malaria discipline that we are trying to inculcate into other troops. Personal measures-- especially in regard to the wearing of protective clothing at all times, and the taking of atabrine suppressive treatment regularly-- are highly important. Inasmuch as our units do not have their own messes, but rather mess with some larger organization, the unit C.O.'s tend to shift the responsibility of atabrine administration on the parent mess. It is to be remembered that even though this messing situation exists, it is still the responsibility of each commanding officer of all survey and control units to know that each man of his command (including himself) is observing good atabrine discipline and other personal anti-malaria measures.

* * * *

A helpful hint to survey or control units with personnel working in scrub typhus areas is supplied by the 6th MSU. They have found that spraying dimethylphthalate by means of a hand sprayer around shoe tops, on pants, or on leggings before going out into the field is very effective against both "chigger-bites," and the bits of scrub-typhus infected mites.

* * * *

A new directive, issued by the Hqs., OMC, has been issued on the matter of reports to be submitted by all survey and control units. For the old units this should more or less clarify and summarize pertinent information required. It is highly important that monthly reports be sent by all units as soon after the close of the month as possible. Technical survey reports by the survey units should be submitted as soon as a representative portion of an area has been surveyed. Prompt submission of all reports is important not only for keeping this office informed of what is going on, and keeping the records of an area up to date (an important consideration in the possible movement of a unit), but also for showing the higher authorities what is being done by our personnel. Monthly reports, or special survey reports, should include representative photographs whenever possible. Likewise, pamphlets or letters of interest devised by any of the components of the malaria organization should be enclosed with the reports.

* * * *

The question is often asked: How much P. vivax and how much P. falciparum is being reported in the New Guinea areas? In a study of the primary, smear-positive cases, as shown by the malaria case cards submitted between August 1, 1943 and December 31, 1943, the following results are derived:

Locations	No. primary cases	% P.V.	% P. f.
Total N. G. & N. G. area	3,645	74	26
Oro Bay- Dobodura	1,574	84	16
Milne Bay	172	69	31
Goodenough Island	261	40	60 (?)
Kiriwina Island	151	40	60
Woodlark Island	118	97	3
Lae	310	69	31
Nadzab	215	43	57
Finschhaven	69	68	32
Upper Ramu Valley	59	64	36

(Port Moresby figures included in Total for New Guinea and N. G. area)

UNCLASSIFIED

The following is an exact reproduction of a letter from War Department,
Hqs., Army Service Forces:

Headquarters, Army Service Forces
Office of the Adjutant General
Washington 25, D.C.

SFX 440 (24 Dec 43) OB-S-SPIOT-M

HM/hfl- 2B. 939 Pentagon

30 December 1943

SUBJECT: Anti-Malaria Supplies for Troops Moving Overseas.

TO : The Commanding Generals,
Ports of Embarkation
The Commanding Officers,
Ports and Sub-Ports of Embarkation
The Quartermaster General
The Surgeon General
Chief of Transportation.

1. In order to insure adequate protection against malaria infection for troops debarking in malarious areas, War Department orders for movement to endemic areas will in the future provide for the shipment by the Quartermaster General and the Surgeon General of the anti-malaria supplies and equipment listed below. These supplies are sufficient to effect malaria control within units upon arrival at overseas destination, until the proper contact with overseas depots has been made and normal supply channels are in operation. Such anti-malaria supplies and equipment are designated as Medical Kit "A" and will consist of Parts I and 2 composed of the following items in quantities sufficient for the strength of each unit, computed on the basis of the allowances indicated:

Item	Stock No.	Unit	Allowance per 100
<u>Part I -- Medical</u>			
Atabrine tablets, 100 mgn.	10845	100	30
Atabrine, 0.2 gm amp	1K07502	5	2
Quinine Sulfate, 5 gr. tab.	13910	1000	1/5
Quinine dihydrochloride amp	13890	12	1
<u>Part II -- Quartermaster</u>			
Repellent, insect, 2 oz btl	51-R-265	Btl.	324
Aerosol dispenser	51-R-159	Ea	35

Note: In those cases where the strength of a unit is less than 100, the Medical Kit "A" will consist of the above items with the allowance for 100 individuals.

2. The above supplies and equipment will be prepared, marked, and shipped only as prescribed in WD movement orders for each unit covered by the movement orders and will be loaded aboard the same vessel with the unit so as to be readily available to the unit commander while en route to overseas destination and immediately upon debarkation. The port commander will insure that both Parts I and 2 provided by the Surgeon General and the Quartermaster General respectively, are included in the Medical Kit "A" and are loaded in accordance with the above instructions.

UNCLASSIFIED

SECRET

3. Items included in Medical Kit "A" set out above are in addition to the normal supply of medical maintenance and pest control supplies and equipment included with certain movements as cargo shipment.

By command of Lieutenant General SOMERVILLE:

J. A. ULIO
Major General
Adjutant General

* * * * *

This office is in receipt of the following two anti-malaria poems:

ATABRINE, OH ATABRINE
(To the refrain of Maryland, My Maryland)

Atabrine, Oh Atabrine
You've discolored all my skin,
Atabrine, Oh Atabrine
Not to take you is a sin.
Remembering MALARIA'S shaking chill
Will prevent me from a chill.
For your sake, dear, I'll take my pill
Atabrine, Oh Atabrine

-- Lt. Col. J.W. Schermerhorn, Inf.
G-2, Intermediate Section, USASOS

* * * * *

In the sylvan dells of New Guinea,
Where the slithering lizards play,
An Anopheles may bit you
And silently fly away.

So, listen carefully, soldier,
Wipe off that smirking grin
You'll sure as hell get malaria
If you don't take your atabrine.

-- anon

* * * * *

Lt. Col. W. V. King, Sn. C. contributes the following entomological news:

1. A few specimens (both larvae and adults) of Anopheles annulipes have recently been received from Goodenough Island. They were collected during 1943 by the Malaria Control Unit of the 1st Marine Division, and were received from Ensign L. J. Carleo. This is the first record known to the writer of the occurrence of this species in the New Guinea region outside of the Port Moresby area, where it is the commonest anopheline.

2. A few larvae of A. longirostris were collected in December, 1943, in a wooded swamp in the Dobodura area. Captain O'Connor, Australian AMCU, has informed us that he has found this species in some numbers in or near the sago swamps near Buna.

3. Several species of Eironella were obtained by the 4th MSU during 1943 in the Dobodura area. These included E. gracilis, E. travostitus, and a species of the papuae group. At Milne Bay, larvae of the E. soosiloi were found to be quite common along the shaded streams, usually in the backwaters and side pools. This species appears to be the most widely distributed one of the genus. It has

SECRET
UNCLASSIFIED

collected at Tsili Tsili and Madzab in the Watat and Markham valleys, and has been reported on Goodenough Island by the 6th MSU. It was described originally from Dutch New Guinea. These species have never been observed to bite humans, and their chief interest is the fact that the genus occurs only in New Guinea region. *B. travestitus* has very short palpi in both sexes, and the general appearance of all species is more like the culicines.

4. larvae of *A. p. moluccensis* were collected at Oro Bay in November, 1943 by the writer and Lt. Porter (17th MSU) in brackish water at the edge of a cleared mangrove swamp. The specific gravity of the water was 1.010, or about 40% that of sea water.

(When anophelines are found by the survey units in brackish water, a specific gravity reading- taken with an ordinary urinometer-, or a chlorine titration should be reported in each case.)

5. For the parasitologists, mention may be made of a convenient method of preparing small quantities of buffered water as needed in the field for Giemsa stains. The buffer salts are mixed dry in the proportion of one (1) part sodium acid phosphate ($\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$), and two (2) parts of anhydrous di-sodium phosphate (Na_2HPO_4). The mixture can apparently be kept indefinitely, and is dissolved in distilled water at the rate of from 0.5 to 1.0 gram per liter (merely estimated). This gives a pH of 7.0.

* * * *

"My brother, who works on malaria control in New Guinea, has the job of catching mosquitoes."

"You mean he catches and kills mosquitoes?"

"No, he doesn't kill them. He says he tries to catch the mosquitoes, and then puts them in his officer's new mosquito-catching light trap!"

* * * *

Analysis by the Office of the Chief Surgeon, USASOS, of the weekly MD Form 36ab from October, 1943 through December, 1943, shows the following results:

Date (wk ending)	NEW GUINEA			AUSTRALIA		
	malaria rate	FUC rate	Combined	malaria rate	FUC rate	Com.
2 Oct.	240	167	407	225	24.7	252
9 Oct.	212	143	355	251	48.4	299
16 Oct.	221	150	379	223	56.5	280
23 Oct.	243	206	450	238	58.1	346
30 Oct.	147	240	388	327	95.1	422
6 Nov.	168	189	370	304	55.1	359
13 Nov.	187	204	392	232	145.8	377
20 Nov.	182	235	416	190	126.4	316
27 Nov.	152	190	350	161	110.5	271
4 Dec.	156	212	368	160	90.7	250
11 Dec.	115	212	327	126	31.6	157
18 Dec.	171	209	460	122	31.6	153
25 Dec.	150	309	460	139	20.6	159

(OLD comment: The high N.G. FUC rates in November and December are probably due to the "dengue" fever in the Markham-Ramu valleys, and the Imsch areas. Evidence to support this is that a Imsch hospital and a Madzab hospital take all FUC cases off of suppressive atabrine on admission, and only a few of these FUC cases have shown positive smears for malaria.)

UNCLASSIFIED

~~SECRET~~
UNCLASSIFIED

The following malaria rates (annual cases per 1000 by weeks unless otherwise noted) are given for the New Guinea area:

Week Ending	ORO BAY - DOBODURA			MILNE BAY		
	SOS	6th Army	FATF	SOS	6th Army	FAF
Dec 3	301	431	172	34.9	56.9	0
11	247	351	184	47.4	39.3	0
18	193	244	135	7.7	9.8	0
25	255	221	228	15.8	29.5	31.4
31	411	386	102	70.5	30.4	20.9

Week Ending	PORT MORESBY					
	Base D	FAF	6th Army	GHQ	14th AA	IS
Dec 3	33.69	68.79	103.27	0	27.49	0
11	94.53	40.56	34.62	0	0	0
18	40	35.1		0	0	0
25	59.8	56.78	172.4	0	0	0
31	65.04	33.6	68.16	0	0	0

Week Ending	GOODENOUGH IS.		WOODLARK IS.		KIRIWINA	
Dec 3			31.1		83.2	
11			268.0		16.3	
18			95.4		32.3	
25			79.4		66.3	
31			120.3		65.5	

Week Ending	LAE		NADZAB (SMF)		FINSCHAFEN (Monthly)		FAF
					SOS	14th AA	
Dec 3	93		383.76				
11	130		205.44				
18	105		613.6		180	147	166
25	93		530.4				
31	99		598.0				

* - - - * - - - * - - - * - - - *

This ends the S.P.A. Newsletter for the month. Remember to send your contributions in for our next issue.

* - - * - - * - - * - - * - - *

Hq, Malaria Control
APO 503

CLASSIFICATION CANCELLED
by authority of
THE SURGEON GENERAL

Date 9 Aug 52
G. Craft, Capt M SC
Security Officer

- 10 -

UNCLASSIFIED

HEADQUARTERS
1020 W BASE
SECTION
OFFICE OF
THE
SURGEON